Appendix C: Snake River information

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Table C-1. USGS and DEQ sampling on Snake River, April 2000 to July 2003. Flows after September 2002 are provisional.

		Tilden Bridge - SR-1								Blackfoot steel bridge - SR-2							
Date	Sampling agency	Flow (cfs)	Dissolved ortho-phosphorus as P (mg/L)	Total phosphorus as P (mg/L)	Total ammonia as N (mg/L)	Total Kjeldahl nitrogen as N (mg/L)	Total NO_2+NO_3 as N (mg/L)	TSS/ SSC[A] (mg/L)	Tur-bidity (NTU)	Flow (cfs)	Dissolved ortho-phosphorus as P (mg/L)	Total phosphorus as P (mg/L)	Total ammonia as N (mg/L)	Total Kjeldahl nitrogen as N (mg/L)	Total NO_2+NO_3 as N (mg/L)	TSS/ SSC[A] (mg/L)	Tur-bidity (NTU)
14-Apr-00	USGS	7380						50									
27-Apr-00	USGS	7640	0.007	0.065	0.006	1	0.169	45	3.2								
28-Apr-00	USGS																
5-May-00	USGS	3990						26									
18-May-00	USGS	4770	0.002	0.031	0.006	0.22	0.077	14	2.3								
19-May-00	USGS																
25-May-00	USGS	3210	0.004	0.036	0.004	0.25	0.035		2.1								
26-May-00	USGS																
1-Jun-00	USGS	8290	0.001	0.059	0.006	0.25	0.1		4.9								
8-Jun-00	USGS	5760	0.001	0.028	0.002	0.25	0.049	18	2.6								
14-Jun-00	USGS	4880	<0.001	0.025	0.004	0.21	0.058	13	1.6								
15-Jun-00	USGS																
5-Jul-00	USGS	3450	0.003	0.024	<0.002	0.23	0.046	15	2.1								
17-Jul-00	USGS																
19-Jul-00	USGS	4170	0.003	0.041	0.008	0.34	0.062	29	3.3								
10-Aug-00	USGS	2170	0.003	0.016	0.003	0.21	0.059	4	0.9								
23-Aug-00	USGS	2110	0.001	0.021	0.006	0.26	0.023	8	<0.5								
29-Aug-00	USGS																
13-Sep-00	USGS	1310	0.003	0.014	0.003	0.21	0.106	3	<0.5								
14-Sep-00	USGS																
27-Sep-00	USGS	2250	0.002	0.02	0.006	0.22	0.063	9	0.6								
29-Sep-00	USGS																
12-Dec-00	DEQ	2190	0.006	0.022	0.007	0.12	0.254	4		2300 [E]	0.074 [1]	0.026	0.007	0.14	0.258	2	
23-Jan-01	DEQ																
28-Feb-01	DEQ	2480	0.012	0.051	0.033	0.2	0.28	14									
5-Apr-01	USGS	2120	0.006 [E]	0.04	0.007	0.39	0.127	29	3								
6-Apr-01	USGS																
10-Apr-01	DEQ	2050	0.005	0.048	0.041	0.36	0.058	9	2.6								
20-Apr-01	USGS	1260	0.005 [E]	0.049	0.004	0.51	0.13	19	5.4								
23-Apr-01	DEQ									1450	<0.005	0.047	0.017	0.35	<0.005	8	
4-May-01	USGS	1370	<0.007	0.047	0.009	0.41	0.209	13	9.9								
7-May-01	DEQ									1500	<0.005	0.047	0.009	0.31	0.007	15	
16-May-01	USGS	1590	<0.007	0.051	0.011	0.42	0.094	14	7.5								
18-May-01	USGS																
22-May-01	DEQ									1680	0.013	0.04	0.008	0.2	0.048	9	
4-Jun-01	DEQ									2390	<0.005	0.038	0.006	0.21	0.099	10	
8-Jun-01	USGS	1830	<0.007	0.035	0.012	0.35	0.075	11	6.1								
20-Jun-01	USGS	1990	<0.007	0.027	0.006	0.25	0.066	10	5								
26-Jun-01	DEQ									1900	<0.005	0.025	0.01	0.3	0.024	2	
2-Jul-01	USGS	1530	<0.007	0.03	0.002	0.36	0.078	15	4								
16-Jul-01	USGS	2160	<0.007	0.03	<0.002	0.26	0.091	10	4.2								
2-Aug-01	USGS	1350	<0.007	0.017	0.008	0.24	0.078	5	3.1								
2-Aug-01	DEQ									1720	0.005	0.03	0.126	0.34	0.008	3	
10-Aug-01	USGS	1160	<0.007	0.018	0.008	0.21	0.086	3	4.7								
13-Aug-01	DEQ									1840	<0.005	0.019	0.005	0.21	<0.005	4	
7-Sep-01	USGS	3830	<0.007	0.032	0.003	0.28	0.037	27	5.8								
10-Sep-01	USGS																
10-Sep-01	DEQ									2780	<0.005	0.016	0.059	0.2	0.005	2	
20-Sep-01	USGS	1880	0.006 [E]	0.017	0.008	0.16	0.05	3	3.4								
21-Sep-01	USGS																
25-Sep-01	DEQ									2820	<0.005	0.018	0.017	0.2	0.005	3	
15-Oct-01	DEQ	2190	<0.005	0.017	0.013	0.13	0.035	4		2470	<0.005	0.013	0.009	0.13	0.034	2	
29-Oct-01	DEQ	1780	0.011	0.014	0.014	0.15	0.052	2		2000	0.011	0.011	0.014	0.13	0.022	1	
15-Nov-01	DEQ	1890	0.018	0.016	0.034	0.15	0.118	3		2140	0.006	0.015	0.014	0.14	0.133	1	
28-Nov-01	DEQ	1840	<0.005	0.013	0.01	0.15	0.19	2		2110	0.005	0.013	0.011	0.13	0.188	2	
24-Jan-02	DEQ	1370	0.02	0.031	0.055	0.18	0.413	4									
28-Feb-02	DEQ	1390	0.019	0.035	0.021	0.2	0.357	5									
26-Mar-02	DEQ	1840	0.006	0.045	0.02	0.28	0.239	24		2050	<0.005	0.03	0.012	0.22	0.24	9	
4-Apr-02	USGS	1880	0.006 [E]	0.049	0.014 [E]	0.37	0.242	18	4.9								
18-Apr-02	USGS	2390	0.007	0.086	<0.015	0.42	0.248	31	10								
22-Apr-02	DEQ									1770	0.011	0.048	0.02	0.33	0.23	10	
9-May-02	USGS	1270	0.004 [E]	0.053	<0.015	0.45	0.128	12	5								

		Firth - SR-3								Shelley bridge - SR-4							
Date	Sampling agency	Flow (cfs)	Dissolved ortho-phosphorus as P (mg/L)	Total phosphorus as P (mg/L)	Total ammonia as N (mg/L)	Total Kjeldahl nitrogen as N (mg/L)	Total NO_2+NO_3 as N (mg/L)	TSS/ SSC[A] (mg/L)	Tur-bidity (NTU)	Flow (cfs)	Dissolved ortho-phosphorus as P (mg/L)	Total phosphorus as P (mg/L)	Total ammonia as N (mg/L)	Total Kjeldahl nitrogen as N (mg/L)	Total NO_2+NO_3 as N (mg/L)	TSS/ SSC[A] (mg/L)	Tur-bidity (NTU)
14-Apr-00	USGS									8740						24	
27-Apr-00	USGS																
28-Apr-00	USGS									9220	0.004	0.03	0.014	0.27	0.106	16	2.5
5-May-00	USGS									7730						12	
18-May-00	USGS																
19-May-00	USGS									7820	0.003	0.024	0.003	0.18	0.101	10	2.9
25-May-00	USGS																
26-May-00	USGS									6880	0.009	0.027	0.005	0.18	0.074		1.2
1-Jun-00	USGS									11700	0.005	0.036	0.007	0.28	0.098		4.7
8-Jun-00	USGS									9130	0.004	0.026	0.012	0.21	0.094	12	3.5
14-Jun-00	USGS																
15-Jun-00	USGS									8160	0.002	0.026	0.01	0.2	0.11	2	2.7
5-Jul-00	USGS									7000	0.004	0.015	0.002	0.2	0.069	5	2.1
17-Jul-00	USGS									7240	0.005	0.022	0.008	0.19	0.071	5	2
19-Jul-00	USGS																
10-Aug-00	USGS									4890	0.007	0.019	0.02	0.2	0.068	2	0.9
23-Aug-00	USGS																
29-Aug-00	USGS									4370	0.004	0.02	<0.002	0.15	0.039	6	<0.5
13-Sep-00	USGS																
14-Sep-00	USGS									3520	0.007	0.021	0.01	0.18	0.046	3	<0.5
27-Sep-00	USGS																
29-Sep-00	USGS									3580	0.004	0.02	0.008	0.2	0.065	4	0.6
12-Dec-00	DEQ		0.009	0.024	0.013	0.13	0.274	2		2700 [E]	0.015	0.026	0.016	0.13	0.324	2	
23-Jan-01	DEQ									2400 [E]	--	0.064	0.064	0.34	0.355	3	
28-Feb-01	DEQ									3000 [E]	0.018	0.035	0.094	0.17	0.266	3	
5-Apr-01	USGS																
6-Apr-01	USGS									2740	0.008	0.034	0.009	0.26	0.21	19	4.5
10-Apr-01	DEQ		0.008	0.091	0.037	0.38	0.109	26									
20-Apr-01	USGS									1970	<0.007	0.037	0.012	0.39	0.104	14	5.6
23-Apr-01	DEQ		0.005	0.048	0.016	0.33	0.006	10									
4-May-01	USGS									3560	<0.007	0.036	0.003	0.27	0.099	9	10
7-May-01	DEQ		<0.005	0.046	0.011	0.3	0.039	11									
16-May-01	USGS																
18-May-01	USGS									6620	<0.007	0.036	0.006	0.2	0.109	13	9.3
22-May-01	DEQ		0.038	0.071	<0.005	0.22	0.118	9									
4-Jun-01	DEQ		<0.005	0.036	0.007	0.19	0.128	8									
8-Jun-01	USGS									5290	0.004 [E]	0.024	0.016	0.18	0.129	5	4.1
20-Jun-01	USGS									5070	0.005 [E]	0.021	0.008	0.18	0.087	4	3.8
26-Jun-01	DEQ		<0.005	0.02	0.013	0.2	0.057	2									
2-Jul-01	USGS									5210	<0.007	0.016	0.002	0.18	0.081	4	2.9
16-Jul-01	USGS									5210	0.007	0.021	0.011	0.22	0.121	4	2.6
2-Aug-01	USGS									4150	<0.007	0.013	0.01	0.23	0.048	2	2.1
2-Aug-01	DEQ		0.006	0.027	0.061	0.25	0.014	2									
10-Aug-01	USGS									4220	0.004 [E]	0.021	0.009	0.17	0.063	2	4.5
13-Aug-01	DEQ		0.006	0.025	<0.005	0.23	0.038	4									
7-Sep-01	USGS																
10-Sep-01	USGS									4320	0.008	0.022	0.004	0.19	0.048	2	11
10-Sep-01	DEQ		<0.005	0.028	0.006	0.2	0.014	8									
20-Sep-01	USGS																
21-Sep-01	USGS									4340	0.009	0.021	0.01	0.16	0.03	2	2.6
25-Sep-01	DEQ		0.007	0.02	0.013	0.2	0.007	2									
15-Oct-01	DEQ		<0.005	0.015	0.012	0.22	0.081	1		2870	0.013	0.023	0.03	0.16	0.142	2	
29-Oct-01	DEQ		0.014	0.017	0.018	0.24	0.092	2		2150	0.026	0.028	0.036	0.14	0.16	2	
15-Nov-01	DEQ		0.006	0.017	0.02	0.12	0.168	<1.0		2280	0.014	0.024	0.029	0.13	0.175	1	
28-Nov-01	DEQ		0.01	0.017	0.007	0.14	0.222	2		2250	0.018	0.029	0.029	0.21	0.248	4	
24-Jan-02	DEQ									1700 [E]	0.024	0.033	0.063	0.15	0.336	2	
28-Feb-02	DEQ									1800 [E]	0.026	0.041	0.081	0.22	0.319	3	
26-Mar-02	DEQ		0.006	0.025	0.017	0.17	0.249	4		2210	0.016	0.025	0.056	0.18	0.281	2	
4-Apr-02	USGS									2090	0.01	0.032	0.038	0.28	0.253	4	3.7
18-Apr-02	USGS									3100	0.013	0.041	0.019	0.33	0.233	8	6.3
22-Apr-02	DEQ		0.014	0.048	0.026	0.28	0.268	10									
9-May-02	USGS									3490	<0.007	0.042	<0.015	0.31	0.083	10	7.9

Table C-1. Continued.

Date	Sampling agency	Tilden Bridge - SR-1								Blackfoot steel bridge - SR-2								Firth - SR-3								Shelley bridge - SR-4							
		Flow (cfs)	Dissolved ortho-phosphorus as P (mg/L)	Total phosphorus as P (mg/L)	Total ammonia as N (mg/L)	Total Kjeldahl nitrogen as N (mg/L)	Total NO_2+NO_3 as N (mg/L)	TSS/ SSC[A] (mg/L)	Tur-bidity (NTU)	Flow (cfs)	Dissolved ortho-phosphorus as P (mg/L)	Total phosphorus as P (mg/L)	Total ammonia as N (mg/L)	Total Kjeldahl nitrogen as N (mg/L)	Total NO_2+NO_3 as N (mg/L)	TSS/ SSC[A] (mg/L)	Tur-bidity (NTU)	Flow (cfs)	Dissolved ortho-phosphorus as P (mg/L)	Total phosphorus as P (mg/L)	Total ammonia as N (mg/L)	Total Kjeldahl nitrogen as N (mg/L)	Total NO_2+NO_3 as N (mg/L)	TSS/ SSC[A] (mg/L)	Tur-bidity (NTU)	Flow (cfs)	Dissolved ortho-phosphorus as P (mg/L)	Total phosphorus as P (mg/L)	Total ammonia as N (mg/L)	Total Kjeldahl nitrogen as N (mg/L)	Total NO_2+NO_3 as N (mg/L)	TSS/ SSC[A] (mg/L)	Tur-bidity (NTU)
14-May-02	DEQ									1170	<0.005	0.047	0.02	0.53	<0.005	14			<0.005	0.04	0.039	0.37	0.005	13									
23-May-02	USGS	3270	<0.007	0.096	<0.015	0.57	0.125	79	22																	6590	<0.007	0.039	0.009 [E]	0.25	0.173	13	9.3
27-May-02	DEQ									2480	0.007	0.043	0.01	0.4	0.042	12			0.012	0.043	0.02	0.25	0.095	13									
6-Jun-02	USGS	2740	<0.007	0.048	<0.015	0.46	0.088	25	6.8																	5700	0.014	0.05	0.017	0.28	0.152	11	9.8
12-Jun-02	DEQ									2250	0.01	0.029	0.026	0.2	<0.005	4.4																	
20-Jun-02	USGS	2420	<0.007	0.042	<0.015	0.44	0.037	20	4.3																	6650	<0.007	0.026	<0.015	0.19	0.111	8	4.1
26-Jun-02	DEQ									1930	<0.005	0.023	0.032	0.3	<0.005	6.4	3.21		<0.005	0.024	0.028	0.23	<0.005	4.4	2.02								
3-Jul-02	USGS	1080	0.007	0.024	0.015	0.23	0.088	6	4.6																	4540	0.004 [E]	0.022	<0.015	0.2 [S]	0.07 [S]	5	3.7
17-Jul-02	DEQ									2490	0.007	0.025	0.024	0.44	0.014	8			0.01	0.03	0.023	0.26	0.058	4.8									
18-Jul-02	USGS	2240	<0.007	0.034	<0.015	0.34	0.058	17	13																	5950	<0.007	0.021	<0.015	0.17	0.081	5	3.7
31-Jul-02	DEQ									4730	0.006	0.026	0.011	0.23	0.022	6			0.01	0.025	0.01	0.22	0.034	7.2									
1-Aug-02	USGS	4290	<0.007	0.029	<0.015	0.2	0.036	28	4.5																	7240	0.008	0.025	0.008 [E]	0.16	0.061	6	3.8
14-Aug-02	DEQ									3100	<0.005	0.021	0.006	0.22	<0.005	4.4			0.005	0.024	0.017	0.27	0.02	5.2									
21-Aug-02	USGS	2650	<0.007	0.024	<0.015	0.18	0.044	6	2.9																	5700	0.004 [E]	0.025	<0.015	0.14	0.051	4	14
4-Sep-02	USGS	5130	<0.007	0.029	<0.015	0.24	0.023	33	5.3																	7150	0.006 [E]	0.022	<0.015	0.32	0.038	6	3
5-Sep-02	DEQ									5980	<0.005	0.029	0.025	0.21	0.021	8.4			0.006	0.027	0.025	0.25	0.034	5.2									
18-Sep-02	USGS	3500	<0.007	0.022	<0.015	0.17	0.034	6	3																	5590	0.007	0.025	<0.015	0.14	0.061	3	5.6
19-Sep-02	DEQ									3600	<0.005	0.019	0.015	0.18	0.036	3.2			0.007	0.02	0.021	0.24	0.009	4.4									
9-Oct-02	DEQ	1560	0.006	0.02	0.015	0.17	0.033	<1.0		1500	0.007	0.017	0.031	0.23	<0.005	<1.0										2310	0.02	0.032	0.021	0.2	0.096	<1.0	
31-Oct-02	DEQ	1890	0.005	0.009	0.018	0.22	0.036	1.6		2150	<0.005	0.008	0.011	0.22	0.037	1.6			0.009	0.014	0.027	0.15	0.086	2		2640	0.017	0.022	0.045	0.13	0.158	1.6	
14-Nov-02	DEQ	2030	<0.005	0.017	<0.005	0.14	0.049	1.6		2260	<0.005	0.013	0.27	0.12	0.093	1.6			0.009	0.02	<0.005	0.15	0.127	1		2540	0.018	0.032	<0.005	0.12	0.2	1.2	
4-Dec-02	DEQ	1980	0.006	0.012	0.021	0.16	0.079	1.2		2130	0.006	0.02	0.007	0.21	0.163	4			0.01	0.02	0.007	0.19	0.206	1.2		2400	0.016	0.024	0.011	0.14	0.24	<1.0	
15-Jan-03	DEQ	1900	0.006	0.021	0.008	0.18	0.3	4		2050	0.007	0.02	0.005	0.14	0.302	4			0.009	0.024	0.034	0.15	0.33	4.4		2370	0.013	0.024	0.049	0.21	0.335	1	
12-Feb-03	DEQ	1840	0.008	0.022	0.08	0.19	0.253	10		2020	0.008	0.027	<0.005	0.2	0.28	5.6			0.012	0.096	0.021	0.37	0.334	30		2200	0.015	0.025	0.028	0.24	0.355	2.8	
18-Mar-03	DEQ	2070	0.014	0.066	0.026	0.4	0.258	21		2200	0.008	0.056	<0.005	0.3	0.293	14			0.012	0.061	0.041	0.26	0.323	11		2560	0.02	0.058	0.062	0.31	0.33	8	
16-Apr-03	DEQ	1200	0.01	0.069	0.008	0.5	0.102	17		1360	0.013	0.064	0.007	0.45	0.062	14			0.025	0.069	0.005	0.41	0.097	15		2590	0.022	0.05	0.021	0.28	0.121	5.6	
7-May-03	DEQ	2000	0.017	0.061	0.023	0.39	0.096	21		2160	0.011	0.041	0.019	0.31	0.091	13			0.017	0.038	<0.005	0.29	0.105	11		4450	0.018	0.036	0.018	0.24	0.126	7.6	
29-May-03	DEQ	2560	0.006	0.048	0.018	0.39	0.038	19	9	2940	0.006	0.042	0.023	0.27	0.069	18	9.26		0.009	0.042	0.027	0.27	0.107	15	7.63	6730	0.013	0.04	0.044	0.19	0.123	10	7.8
19-Jun-03	DEQ	2930	<0.005	0.042	0.005	0.46	0.052	21	9	3500	<0.005	0.03	<0.005	0.28	0.054	12	5.74		<0.005	0.029	0.018	0.25	0.08	7.2	4.27	7010	<0.005	0.026	0.025	0.21	0.111	6.4	4.98
2-Jul-03	DEQ	2600	0.005	0.032	0.009	0.27	0.027	10		3050	0.005	0.026	0.011	0.24	0.023	6.8			0.008	0.025	0.01	0.22	0.039	3.2		6400	0.011	0.03	0.015	0.23	0.068	3.2	
30-Jul-03	DEQ	6480	0.009	0.043	0.008	0.29	0.025	18		6810	0.01	0.044	0.008	0.35	0.031	18			0.011	0.035	0.013	0.25	0.051	10		8950	0.013	0.035	0.021	0.22	0.06	11	
Duplicate samples																																	
28-Feb-01	DEQ																									3000 [E]	0.019	0.039	0.089	0.16	0.268	2	
7-May-01	DEQ																		<0.005	0.044	0.008	0.29	0.04	10									
2-Aug-01	DEQ																		0.006	0.018	0.021	0.3	0.011	2									
25-Sep-01	DEQ																		0.01	0.021	0.016	0.17	0.008	2									
29-Oct-01	DEQ																										0.028	0.027	0.022	0.13	0.157	2	
12-Jun-02	DEQ										0.01	0.031	0.026	0.19	<0.005	7.2																	
5-Sep-02	DEQ																		0.006	0.027	0.018	0.2	0.036	4									
9-Oct-02	DEQ										0.009	0.017	0.018	0.38	<0.005	<1.0																	
4-Dec-02	DEQ		0.006	0.014	0.006	0.16	0.093	1.2																									
16-Apr-03	DEQ										0.013	0.061	0.016	0.43	0.061	13																	
19-Jun-03	DEQ										0.005	0.033	0.007	0.27	0.055	12	6.3																
2-Jul-03	DEQ										0.005	0.029	0.008	0.25	0.023	6																	
30-Jul-03	DEQ										0.013	0.043	0.006	0.34	0.032	16																	
Blank samples																																	
28-Feb-01	DEQ		<0.005	<0.005	0.009 [2]	<0.05	<0.005	<1.0																									
7-May-01	DEQ																		<0.005	0.005	0.012 [3]	<0.05	0.018 [3]	<1.0									
13-Aug-01	DEQ																		<0.005	<0.005	<0.005	<0.05	0.033	<1.0									
29-Oct-01	DEQ		<0.005	0.006	0.008	<0.05	0.007	<1.0																									
17-Jul-02	DEQ										<0.005	<0.005	0.11	0.11	0.005	<1.0																	
5-Sep-02	DEQ										<0.005	<0.005	0.02	<0.05	0.271	<1.0																	
4-Dec-02	DEQ		<0.005	<0.005	<0.005	<0.05	<0.005	<1.0																									
12-Feb-03	DEQ		<0.005	<0.005	<0.005	<0.05	0.005	<1.0																									
7-May-03	DEQ		0.01	<0.005	<0.005	<0.05	0.051	<1																									
2-Jul-03	DEQ		0.005	0.005	<0.005	<0.05	0.078	<1																									

[A]TSS=total suspended solids (DEQ analysis), SSC=suspended sediment concentration (USGS analysis)

[E]estimated

[S]most probable value

[1]dissolved ortho phosphate higher than total phosphorus most likely because of contamination

[2]because the lab assumed this sample was a blank they repeated the ammonia test and measured a similar concentration of 0.010 mg/l

[3]because the lab assumed this sample was a blank they repeated the ammonia and NO_2/NO_3 tests and measured concentrations of 0.009 mg/l and 0.016 mg/l

Table C-2. USGS bedload sampling at Snake River near Shelley (13060000) and near Blackfoot (13069500) gage sites, 2000-2002.

Date	Time	Flow (cfs)	Suspended sediment (mg/L)	Suspended sediment (tons/day)	Bedload sediment (tons/day)	Number of sampling points	Sampling location, cross section (ft from left bank)	Sampler type (code)	Sampling method (code)	Sampler bag mesh size (mm)	Sediment bedload sieve diameter, percent finer than										
											.062 mm	.125 mm	.250 mm	.500 mm	1.00 mm	2.00 mm	4.00 mm	8.00 mm	16.0 mm	32.0 mm	64.0 mm
Snake River near Shelley																					
14-Apr-00	1433	8740			0.8	20	470	1100	1000	0.25	0	0	2	63	83	93	100	100	100	100	100
14-Apr-00	1506	8740			0.3	20	470	1100	1000	0.25	0	5	15	60	80	95	100	100	100	100	100
14-Apr-00	1549	8740	24	566																	
28-Apr-00	1008	9220	16	398																	
5-May-00	1420	7730	12	250																	
19-May-00	1318	7820			0.4	20	470	1100	1000	0.25	0	0	3	76	97	100	100	100	100	100	100
19-May-00	1356	7820			0.1	20	470	1100	1000	0.25	0	0	0	40	40	60	100	100	100	100	100
19-May-00	1241	7820	10	211																	
8-Jun-00	1254	9130	12	296																	
8-Jun-00	1316	9130			0.34	20	470	1100	1000	0.25	0	0	4	67	92	100	100	100	100	100	100
8-Jun-00	1348	9130			0.1	20	470	1100	1000	0.25	0	0	0	62	88	100	100	100	100	100	100
15-Jun-00	1115	8160	2	44																	
5-Jul-00	1545	7000	5	94																	
17-Jul-00	1248	7240	5	98																	
10-Aug-00	915	4840			0.08	20	470	1100	1000	0.25	0	0	20	80	80	100	100	100	100	100	100
10-Aug-00	1000	4810			0.04	20	470	1100	1000	0.25	0	0	0	100	100	100	100	100	100	100	100
10-Aug-00	845	4890	2	26																	
29-Aug-00	1343	4370	6	71																	
14-Sep-00	1220	3520	3	29																	
29-Sep-00	1035	3580	4	39																	
6-Apr-01	1035	2870			0.04	20	462	1100	1000	0.25	0	0	33	100	100	100	100	100	100	100	100
6-Apr-01	1115	2870			0.12	20	462	1100	1000	0.25	0	12	25	62	75	88	100	100	100	100	100
6-Apr-01	945	2740	19	141																	
20-Apr-01	1400	1970	14	74																	
4-May-01	1250	3480			0.15	20	465	1100	1000	0.25	0	0	10	80	90	100	100	100	100	100	100
4-May-01	1330	3480			0.03	20	465	1100	1000	0.25	0	0	0	50	100	100	100	100	100	100	100
4-May-01	1207	3560	9	87																	
18-May-01	1252	6620	13	232																	
8-Jun-01	1450	5200			0.16	20	470	1100	1000	0.25	0	0	9	64	82	100	100	100	100	100	100
8-Jun-01	1530	5200			0.09	20	470	1100	1000	0.25	0	0	17	33	83	100	100	100	100	100	100
8-Jun-01	1410	5290	5	71																	
20-Jun-01	836	5070	4	55																	
2-Jul-01	933	5210			2.6	20	470	1100	1000	0.25	0	0	15	86	98	99	100	100	100	100	100
2-Jul-01	1000	5210			0.03	20	470	1100	1000	0.25	0	0	0	0	0	50	100	100	100	100	100
2-Jul-01	916	5210	4	56																	
16-Jul-01	1033	5210	4	56																	
2-Aug-01	1150	4150	2	22																	
10-Aug-01	830	4220	2	6.6																	
10-Sep-01	934	4320	2	23																	
21-Sep-01	1118	4340	2	23																	
4-Apr-02	1732	2090			0.02	20	398	1100	1000	0.25	24	30	38	77	91	100	100	100	100	100	100
4-Apr-02	1803	2100			0.01	20	398	1100	1000	0.25	53	55	64	78	87	100	100	100	100	100	100
9-May-02	1215	3490			0.01	20	462	1100	1000	0.25	10	15	25	83	92	100	100	100	100	100	100
9-May-02	1320	3470			0	20	462	1100	1000	0.25	31	42	56	80	88	100	100	100	100	100	100
6-Jun-02	1115	5700			0.02	20	468	1100	1000	0.25	0	0	17	58	67	83	100	100	100	100	100
6-Jun-02	1215	5730			0.46	20	468	1100	1000	0.25	0	0.3	1	12	25	70	100	100	100	100	100
1-Aug-02	1215	7240			0.04	20	470	1100	1000	0.25	0	0	7	63	83	93	100	100	100	100	100
1-Aug-02	1245	7240			0.01	20	470	1100	1000	0.25	0	0	0	33	56	89	100	100	100	100	100

Table C-2. Continued.

Date	Time	Flow (cfs)	Suspended sediment (mg/L)	Suspended sediment (tons/day)	Bedload sediment (tons/day)	Number of sampling points	Sampling location, cross section (ft from left bank)	Sampler type (code)	Sampling method (code)	Sampler bag mesh size (mm)	Sediment bedload sieve diameter, percent finer than										
											.062 mm	.125 mm	.250 mm	.500 mm	1.00 mm	2.00 mm	4.00 mm	8.00 mm	16.0 mm	32.0 mm	64.0 mm
Snake River near Blackfoot																					
14-Apr-00	1111	7320			62	20	304	1100	1000	0.25	0	0	1	47	64	64	65	65	78	88	100
14-Apr-00	1144	7320			51	20	304	1100	1000	0.25	0	0	2	69	92	92	93	94	99	100	100
14-Apr-00	1224	7380	50	996																	
27-Apr-00	1047	7640	45	928																	
5-May-00	1045	3990	26	280																	
18-May-00	1219	4770	14	180																	
18-May-00	1304	4740			4.9	20	304	1100	1000	0.25	0	0	5	86	98	100	100	100	100	100	100
18-May-00	1340	4720			9	20	304	1100	1000	0.25	0	0	4	74	98	100	100	100	100	100	100
8-Jun-00	915	5760	18	280																	
8-Jun-00	1030	5760			8.1	20	294	1100	1000	0.25	0	0	2	79	99	100	100	100	100	100	100
8-Jun-00	1102	5760			8.5	20	294	1100	1000	0.25	0	0	3	69	98	100	100	100	100	100	100
14-Jun-00	1430	4880	13	171																	
5-Jul-00	1158	3450	15	140																	
19-Jul-00	845	4170	29	327																	
10-Aug-00	1305	2170	4	23																	
10-Aug-00	1340	2260			0.2	20	272	1100	1000	0.25	0	5	23	73	86	95	100	100	100	100	100
10-Aug-00	1415	2250			0.1	20	272	1100	1000	0.25	0	6	18	71	88	100	100	100	100	100	100
23-Aug-00	1547	2110	8	46																	
13-Sep-00	1250	1310	3	11																	
27-Sep-00	1333	2250	9	55																	
5-Apr-01	952	2120	29	166																	
5-Apr-01	1055	2220			1.3	20	270	1100	1000	0.25	6	15	32	91	99	100	100	100	100	100	100
5-Apr-01	1200	2220			2.8	20	270	1100	1000	0.25	2	5	24	84	99	100	100	100	100	100	100
20-Apr-01	1107	1260	19	65																	
4-May-01	732	1370	13	48																	
4-May-01	745	1180			0.2	20	262	1100	1000	0.25	0	0	15	88	96	100	100	100	100	100	100
4-May-01	850	1180			0.1	20	262	1100	1000	0.25	0	0	0	75	94	100	100	100	100	100	100
16-May-01	1408	1590	14	60																	
8-Jun-01	958	1830	11	54																	
8-Jun-01	920	1830			0.8	20	270	1100	1000	0.25	0	1	25	92	97	99	100	100	100	100	100
8-Jun-01	1035	1830			0.9	20	270	1100	1000	0.25	0	1	22	92	99	100	100	100	100	100	100
20-Jun-01	1211	1990	10	54																	
2-Jul-01	1245	1530	15	62																	
2-Jul-01	1300	1530			0.1	20	266	1100	1000	0.25	0	0	0	17	50	83	100	100	100	100	100
2-Jul-01	1330	1530			1.7	20	266	1100	1000	0.25	0	1	2	25	93	100	100	100	100	100	100
16-Jul-01	1308	2160	10	58																	
2-Aug-01	910	1350	5	18																	
10-Aug-01	1210	1160	3	9.4																	
7-Sep-01	1250	3830	27	279																	
20-Sep-01	1652	1880	3	15																	
4-Apr-02	1341	1880			0.07	20	270	1100	1000	0.25	2	10	31	78	89	94	96	100	100	100	100
4-Apr-02	1429	1890			0.21	20	270	1100	1000	0.25	1	2	8	90	96	99	100	100	100	100	100
9-May-02	920	1270			0.02	20	262	1100	1000	0.25	1	3	17	81	96	98	100	100	100	100	100
9-May-02	1022	1290			0.04	20	262	1000	1000	0.25	2	5	26	86	98	100	100	100	100	100	100
6-Jun-02	845	2720			0.54	20	260	1100	1000	0.25	0.2	0.5	15	92	99	100	100	100	100	100	100
6-Jun-02	945	2710			0.41	20	260	1100	1000	0.25	0	0.2	14	97	99	100	100	100	100	100	100
1-Aug-02	840	4320			8.7	20	287	1100	1000	0.25	0.1	0.4	7	73	98	100	100	100	100	100	100
1-Aug-02	915	4340			9.9	20	287	1100	1000	0.25	0	0.1	0.6	28	98	99	100	100	100	100	100

Table C-3. USGS Snake River temperature monitoring data.

	WY2000						WY2001					
	nr Shelley			nr Blackfoot			nr Shelley			nr Blackfoot		
Date	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1-Apr												
2-Apr												
3-Apr												
4-Apr												
5-Apr												
6-Apr										10.7	8.7	9.5
7-Apr							9.4	6.8	7.6	9.1	7.9	8.6
8-Apr							9.9	5.4	6.8	8.4	6.7	7.5
9-Apr							11.1	4.7	6.9	9.0	6.0	7.4
10-Apr							10.6	4.7	6.9	9.4	7.1	8.2
11-Apr							9.9	4.4	6.6	8.8	7.1	7.9
12-Apr							6.3	4.3	5.2	8.1	6.5	7.0
13-Apr							6.9	3.7	5.3	7.3	5.3	6.3
14-Apr							10.0	4.3	6.0	8.4	5.7	6.9
15-Apr							11.7	3.8	7.0	9.7	6.5	8.0
16-Apr							13.4	4.9	8.3	10.8	7.6	9.1
17-Apr							15.1	6.2	9.6	12.2	8.7	10.3
18-Apr							16.1	6.9	10.7	13.2	9.9	11.5
19-Apr							14.0	8.5	10.7	12.9	10.5	11.8
20-Apr							12.6	8.6	9.7	12.1	9.7	10.7
21-Apr							14.5	8.5	11.0	11.3	8.7	10.0
22-Apr							15.4	9.2	11.3	13.0	9.9	11.3
23-Apr							13.1	8.6	10.6	12.5	10.5	11.6
24-Apr							16.2	8.6	11.8	14.1	10.5	12.3
25-Apr							17.5	9.4	12.6	15.2	11.8	13.5
26-Apr							16.9	10.9	13.2	15.8	12.7	14.4
27-Apr							15.3	12.5	13.7	15.7	13.6	14.7
28-Apr				12.1	10.2	11.2	14.2	12.0	13.2	15.5	13.6	14.5
29-Apr				11.6	10.0	11.0	12.5	11.1	11.8	14.4	12.4	13.1
30-Apr	10.7	9.6	10.2	12.5	10.2	11.3	11.1	10.5	10.8	12.9	11.9	12.3
Month												
1-May	10.6	9.2	10	12.5	10.2	11.4	10.5	9.5	10.1	12.4	11.0	11.6
2-May	11.6	10.1	10.8	12.7	10.5	11.7	10.8	8.5	9.4	11.3	10.2	10.7
3-May	12.7	10.6	11.5	13.6	11.1	12.3	11.1	7.7	9.1	11.5	9.3	10.3
4-May	12.6	11.6	12.0	13.6	12.4	13.0	12.6	7.7	9.8	12.9	9.9	11.3
5-May	12.1	9.9	11.2	13.5	11.6	12.2	12.2	8.6	10.0	12.5	11.3	12.0
6-May	9.9	8.4	9.1	11.6	10.7	11.0	12.5	9.4	10.8	12.9	10.8	11.8
7-May	8.4	7.8	8.0	10.8	9.4	9.9	12.5	10.0	11.0	13.3	11.0	12.2
8-May	8.5	7.5	8.0	10.2	8.7	9.4	12.5	9.9	11.1	14.2	11.9	13.1
9-May	9.3	8.1	8.6	10.2	9.1	9.7	13.0	10.9	11.6	14.4	12.9	13.6
10-May	9.5	8.7	9.1	10.7	9.3	10	12.8	10.9	11.7	14.1	11.9	13.1
11-May	8.7	7.9	8.1	10.4	8.3	8.9	13.0	10.9	11.9	14.9	12.2	13.5
12-May	8.1	7.2	7.7	9.7	7.9	8.6	14.0	11.7	12.7	15.5	13.0	14.2
13-May	9.0	7.3	8.2	10.2	8.3	9.2	15.1	12.6	13.7	15.7	13.9	14.7
14-May	10.4	8.5	9.5	11.6	9.3	10.2	15.4	13.4	14.1	16.5	14.2	15.2
15-May	11.6	10.3	10.9	12.5	10.2	11.3	14.3	13.1	13.7	15.8	14.2	14.8
16-May	11.5	10.9	11.1	12.4	11.3	11.8	13.9	12.3	13.0	15.2	13.5	14.3
17-May	10.9	10.3	10.6	11.9	10.8	11.4	12.6	11.9	12.2	14.9	13.2	14.0
18-May	11.0	9.8	10.3	12.7	10.8	11.6	13.0	12.2	12.6	14.7	13.6	14.2
19-May	12.0	10.1	11.0	12.7	11.3	12.0	13.3	12.3	12.8	14.7	13.5	14.2
20-May	13.4	11.6	12.2	13.6	11.6	12.5	13.6	12	12.8	14.1	13.0	13.5
21-May	13.5	12.0	12.7	14.5	12.5	13.4	13.7	11.9	12.5	14.6	12.1	13.3
22-May	13.7	12.9	13.2	14.5	13.3	14.0	13.7	11.6	12.4	15.8	12.9	14.2
23-May	14.1	12.9	13.5	15.3	13.5	14.3	15.3	12.3	13.6	16.8	13.9	15.3
24-May	14.7	13.4	14.0	15.6	14.2	14.9	17.2	13.6	15.2	17.7	14.6	16.0
25-May	14.9	14.1	14.3	15.5	14.5	15.0	17.7	14.8	15.9	18.2	15.8	17.1
26-May	14.6	13.7	14.0	15.6	14.4	15.0	16.9	15.1	15.7	18.0	16.5	17.3
27-May	14.0	13.2	13.7	15.6	13.9	14.8	16.4	14.8	15.4	18.0	16.1	17.1
28-May	13.7	12.6	13.0	15.5	14.1	14.9	15.8	14.7	15.1	17.7	16.0	16.9
29-May	13.2	12.0	12.7	15.2	13.6	14.4	15.1	13.9	14.6	17.1	15.2	16.1
30-May	13.5	11.8	12.8	14.9	13.1	14.1	14.2	13.3	13.7	16.0	13.8	14.9
31-May	13.2	11.8	12.3	14.5	12.8	13.6	15.3	13.3	14.2	17.2	14.2	15.7
Month	14.9	7.2	11.1	15.6	7.9	12.1	17.7	7.7	12.7	18.2	9.3	14.1

Table C-3. Continued.

	WY2000						WY2001					
	nr Shelley			nr Blackfoot			nr Shelley			nr Blackfoot		
Date	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1-Jun	12.7	11.2	12.0	14.2	12.1	13.1	16.2	14.0	15.1	18.9	15.0	16.8
2-Jun	13.2	11.5	12.4	14.9	12.7	13.8	16.4	15.0	15.5	17.7	16.0	16.7
3-Jun	14.1	12.6	13.4	15.5	13.1	14.3	15.0	13.1	14.2	16.3	13.9	14.9
4-Jun	14.6	13.0	13.9	16.4	13.9	15.1	13.1	10.5	11.7	13.9	12.2	12.8
5-Jun	14.6	13.4	14.1	16.4	14.4	15.5	10.9	10.2	10.5	12.9	11.3	12.1
6-Jun	15.1	13.8	14.5	16.8	14.5	15.6	12.0	10.5	11.3	14.4	11.6	13.0
7-Jun	15.7	14.1	15.0	17.2	15	16.1	14.2	12.0	13.1	16.1	13.0	14.5
8-Jun	15.5	14.6	15.1	16.9	15.3	16.2	16.1	13.7	14.9	17.7	14.6	16.0
9-Jun	14.9	13.5	14.0	16.6	14.5	15.3	17.3	15.1	16.1	18.4	15.8	17.0
10-Jun	13.5	12.6	13.0	15.2	13.8	14.4	17.3	15.4	16.3	19.2	15.8	17.5
11-Jun	13.0	12.1	12.7	15.0	13.5	14.3	17.0	15.4	16.0	18.5	16.1	17.4
12-Jun	12.9	12.4	12.6	15.0	13.5	13.9	15.6	13.4	14.8	17.4	14.1	15.8
13-Jun	13.0	12.1	12.5	14.9	12.7	13.6	13.4	11.4	12.6	14.1	12.4	12.8
14-Jun	14.4	12.3	13.2	15.3	13.3	14.3	11.4	10.5	10.9	14.7	11.6	13.1
15-Jun	15.4	14.0	14.6	15.3	14.2	14.9	13.1	10.8	12.0	14.7	12.7	13.7
16-Jun	14.9	14.1	14.5	16.1	14.2	15.1	15.0	13.1	14.2	16.3	13.0	14.5
17-Jun	14.6	13.7	14.1	16.3	14.5	15.5	16.1	15.0	15.5	16.6	15.2	16.0
18-Jun	14.9	13.5	14.2	16.6	14.7	15.6	16.2	15.0	15.4	16.8	14.9	16.0
19-Jun	14.9	14.3	14.5	16.4	15.0	15.7	16.4	14.7	15.5	17.4	15.0	16.2
20-Jun	15.1	13.7	14.1	16.1	14.5	15.4	17.2	15.0	16.1	18.9	15.8	17.2
21-Jun	14.6	13.4	14.0	16.6	14.9	15.7	18.0	15.8	16.9	19.8	16.6	18.1
22-Jun	16.2	14.6	15.4	17.4	15.2	16.2	18.6	17.0	17.7	20.6	17.4	18.9
23-Jun	17.0	15.9	16.4	18.2	16.4	17.2	19.6	17.5	18.4	21.1	18.4	19.7
24-Jun	17.8	16.2	16.7				19.8	17.8	18.6	21.5	18.5	20.0
25-Jun	18.2	16.2	17.0				18.6	17.2	17.9	20.5	17.7	19.2
26-Jun	17.8	16.3	16.9				17.7	16.5	17.2	19.5	17.4	18.1
27-Jun	18.1	16.0	16.8				18.3	16.2	17.2	20.6	16.8	18.5
28-Jun	17.8	15.9	16.6				19.6	16.5	17.9	21.3	18.0	19.6
29-Jun	18.1	16.0	16.8				20.4	17.7	18.9	22.1	18.4	20.2
30-Jun	17.8	16.3	16.8				20.9	18.5	19.6	22.8	19.0	20.8
Month	18.2	11.2	14.6				20.9	10.2	15.4	22.8	11.3	16.6
1-Jul	17.4	16.5	16.8	20.0	17.5	18.6	20.9	18.6	19.5	22.8	19.5	21.2
2-Jul	17.9	16.0	16.8	19.7	17.5	18.6	21.4	18.5	19.7	23.1	19.5	21.2
3-Jul	16.6	16.2	16.4	19.2	17.5	18.3	21.4	18.9	20.0	23.5	19.7	21.5
4-Jul	16.5	15.5	16.0	18.0	16.0	16.9	21.6	19.4	20.3	23.3	20.6	21.9
5-Jul	16.5	15.4	15.9	18.5	16.1	17.3	21.6	19.8	20.3	23.1	20.8	21.8
6-Jul	16.8	15.2	15.9	18.4	16.4	17.4	21.1	19.3	20.0	22.6	20.3	21.3
7-Jul	17.3	16.2	16.7	18.8	17.1	17.9	19.9	19.3	19.6	21.3	19.7	20.2
8-Jul	17.6	16.6	17.1	19.2	17.4	18.4	20.2	18.9	19.4	21.6	19.0	20.2
9-Jul	17.8	16.8	17.3	19.0	17.9	18.5	19.8	18.8	19.2	20.6	19.5	20.1
10-Jul	17.3	16.5	16.9	19.0	17.5	17.9	20.4	19.1	19.6	21.8	19.2	20.4
11-Jul	17.0	15.9	16.5	19.0	16.8	17.8	20.7	19.1	19.8	21.6	19.8	20.7
12-Jul	17.8	16.0	16.9	19.5	17.5	18.6	21.4	19.4	20.1	21.8	19.3	20.5
13-Jul	18.6	17.6	18.0	19.7	17.7	18.8	21.4	19.6	20.1	21.3	19.8	20.6
14-Jul	18.6	17.8	18.0	19.7	18.5	19.0	21.2	19.1	19.8	21.3	19.3	20.3
15-Jul	18.4	17.4	17.8	19.3	18.0	18.7	21.2	18.6	19.3	21.0	19.2	19.9
16-Jul	18.6	17.3	17.9	19.7	18.4	19.0	20.1	18.1	18.9	21.1	18.2	19.5
17-Jul	19.2	18.2	18.5	19.7	18.7	19.1	19.9	18.1	18.8	20.0	18.9	19.4
18-Jul	18.6	17.8	18.2	19.3	17.9	18.6	20.4	18.0	18.9	20.5	18.2	19.2
19-Jul	17.8	17.0	17.4	19.5	18.0	18.8	20.6	18.0	19.1	21.1	18.4	19.7
20-Jul	18.2	16.6	17.4	19.3	17.7	18.5	21.4	18.3	19.5	21.6	18.9	20.1
21-Jul	19.1	17.4	18.2	19.5	17.7	18.6	21.9	18.3	19.8	21.3	18.7	20.0
22-Jul	20.3	17.6	18.8				22.2	18.5	20.0	21.5	18.5	20.0
23-Jul	20.8	18.1	19.1				22.6	18.5	20.1	22.1	18.5	20.3
24-Jul	20.5	18.1	19.0				22.7	18.5	20.3	22.1	19.0	20.5
25-Jul	21.0	17.6	19.0				23.4	18.5	20.4	22.1	18.9	20.4
26-Jul	20.5	17.9	18.6				22.6	18.5	20.1	22	18.9	20.4
27-Jul	20.2	17.6	18.4				22.4	18.3	20.0	22.1	18.4	20.2
28-Jul	20.2	17.1	18.5				21.7	18.5	19.7	21.6	19.0	20.3
29-Jul	21.0	18.2	19.3	22.8	18.8	20.7	21.2	18.1	19.5	21.0	18.0	19.5
30-Jul	21.3	18.6	19.7	23.0	19.0	20.9	21.2	17.7	19.1	21.0	18.0	19.5
31-Jul	21.3	18.9	20.0	23.1	19.8	21.3	20.6	17.2	18.5	19.8	17.4	18.6
Month	21.3	15.2	17.8				23.4	17.2	19.7	23.5	17.4	20.3

Table C-3. Continued.

	WY2000						WY2001					
	nr Shelley			nr Blackfoot			nr Shelley			nr Blackfoot		
Date	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
1-Aug	21.1	19.4	20.2	23.1	20.0	21.4	21.4	16.7	18.7	21.0	17.1	19.0
2-Aug	21.5	19.4	20.1	23.1	19.8	21.3	22.1	17.5	19.5	22.0	18.2	20.0
3-Aug	20.8	19.1	19.7	22.8	19.8	20.8	20.7	18.1	19.5	20.8	18.9	19.8
4-Aug	20.7	18.7	19.4	22.8	19.5	20.9	22.7	18.8	20.4	22.1	18.7	20.3
5-Aug	20.2	18.4	19.0	21.5	19.3	20.4	22.7	18.8	20.4	22.3	19.2	20.7
6-Aug	20.3	18.1	19.0	20.5	18.8	19.7	23.4	18.9	20.8	22.6	19.5	21.0
7-Aug	20.3	18.4	19.1	20.8	18.7	19.7	23.6	19.9	21.3	22.3	20.2	21.2
8-Aug	20.2	18.4	19.1	20.5	18.7	19.6	24.3	19.9	21.7	23.0	19.8	21.4
9-Aug	21.3	18.7	19.5	21.0	19.2	20.0	22.7	20.1	21.0	22.1	20.3	20.9
10-Aug	21.8	19.1	19.9	22.0	19.5	20.5	23.2	19.3	20.8	21.8	19.0	20.4
11-Aug	21.5	18.1	19.5	21.6	17.2	19.8	22.6	19.1	20.5	21.6	19.3	20.4
12-Aug	21.7	17.3	19.0	22.0	15.8	19.1	22.7	18.6	20.3	21.6	19.2	20.4
13-Aug	21.5	17.4	19.0	21.8	17.5	19.7	22.6	19.3	20.4	22.0	19.3	20.5
14-Aug	21.5	17.1	18.9	22.3	17.1	19.6	23.6	19.1	21.0	22.1	19.3	20.7
15-Aug	20.7	17.4	18.8	21.0	17.4	19.4	22.7	19.4	20.8	21.5	19.7	20.5
16-Aug	21.7	17.3	18.9	22.0	16.4	19.3	22.7	18.6	20.4	21.8	18.9	20.3
17-Aug	21.8	17.1	18.7	21.1	17.1	19.2	22.9	18.8	20.5	22.1	19.3	20.6
18-Aug	20.7	17.6	18.6	21.6	17.2	19.4	22.2	18.9	20.2	21.5	19.5	20.5
19-Aug	20.5	17.4	18.6	20.6	17.5	19.0	21.4	18.8	19.6	20.6	18.5	19.6
20-Aug	19.2	16.8	17.7	19.5	17.2	18.3	20.1	17.8	18.8	20.0	18.2	19.1
21-Aug	19.2	16.5	17.5	18.8	16.6	17.8	21.1	17.2	18.7	19.8	17.7	18.9
22-Aug	19.9	16.2	17.8	19.8	16.9	18.2	22.1	17.3	19.3	20.3	17.4	18.9
23-Aug	21.2	17.4	18.4	19.3	17.4	18.3	21.2	17.8	19.3	20.3	18.4	19.3
24-Aug	21	17.8	19.0	21.1	17.5	19.1	22.1	17.8	19.5	20.2	18.0	19.1
25-Aug	21.8	18.1	19.6	21.1	18.4	19.7	22.2	17.3	19.4	20.5	17.7	19.0
26-Aug	21.5	18.7	19.7	21.0	18.5	19.7	22.7	17.2	19.5	21.0	18.0	19.4
27-Aug	21.2	18.1	19.2	20.8	18.0	19.4	22.2	17.7	19.5	20.6	18.4	19.5
28-Aug	20.3	17.1	18.4	20.1	17.9	18.9	22.4	18.0	19.8	20.5	18.2	19.3
29-Aug	20.7	16.3	18.0	20.1	16.9	18.6	22.7	17.8	19.9	20.6	18.2	19.4
30-Aug	19.1	17.1	17.6	19.0	17.4	18.0	21.6	17.8	19.5	20.0	18.7	19.4
31-Aug	19.2	16.3	17.3	18.2	16.1	17.2	21.9	18.3	19.6	20.3	18.2	19.2
Month	21.8	16.2	18.9	23.1	15.8	19.4	24.3	16.7	20.0	23.0	17.1	20.0
1-Sep	18.1	15.9	16.7	18.4	16.3	17.0	21.2	18.3	19.3	20.3	18.7	19.5
2-Sep	18.1	15.4	16.1	16.4	15.5	15.9	20.9	17.8	19.1	19.8	18.4	19.1
3-Sep	17.8	14.7	15.9	16.8	14.9	15.7	20.6	18.0	19.0	19.8	18.2	19.0
4-Sep	17.9	15.1	16.2	17.4	15.6	16.4	20.6	18.0	19.0	19.7	18.4	19.0
5-Sep	18.6	15.1	16.4	16.9	15.6	16.3	20.2	18.1	19.0	19.5	18.7	19.1
6-Sep	17.0	14.9	15.6	16.3	15.0	15.7	18.1	16.1	17.0	19.2	16.1	17.1
7-Sep	17.3	14.1	15.4	16.6	14.5	15.5	16.5	14.5	15.5	16.3	15.3	15.9
8-Sep	17.9	14.1	15.5	16.6	15.0	15.8	15.8	13.9	14.6	15.5	14.1	14.8
9-Sep	17.0	12.9	14.5	15.8	14.2	15.0	16.4	13.4	14.7	15.5	14.1	14.8
10-Sep				15.6	13.5	14.6	17.0	13.6	15.0	16.1	14.4	15.2
11-Sep				16.3	13.9	15.1	17.8	14.2	15.7	16.8	14.6	15.6
12-Sep				16.9	14.4	15.6	17.2	15.3	16.0	16.5	15.5	15.9
13-Sep				18.2	14.5	16.4	17.8	15.6	16.4	16.9	15.5	16.1
14-Sep				18.7	15.0	17.0	18.0	15.4	16.4	17.4	15.3	16.2
15-Sep	20.5	15.7	17.7	19.0	15.8	17.5	18.6	15.6	16.8	17.7	16.0	16.8
16-Sep	20.8	15.9	17.8	18.8	16.3	17.7	18.5	15.9	16.9	17.6	16.0	16.8
17-Sep	20.8	16.6	18.0	19.5	16.9	18.1	18.8	16.1	17.0	17.7	15.8	16.7
18-Sep	19.1	16.2	17.3	18.0	16.6	17.4	18.5	15.8	16.8	17.7	15.8	16.8
19-Sep	18.1	15.5	16.7	17.2	15.8	16.5	18.0	15.8	16.6	17.4	15.7	16.5
20-Sep	17.4	14.3	15.5	16.1	14.2	15.3	17.5	15.1	16.0	16.8	15.0	15.9
21-Sep	14.7	12.9	14.1	15.5	14.2	14.8	17.3	14.5	15.7	16.9	14.9	15.8
22-Sep	12.9	10.9	12.0	14.2	11.4	12.5	17.7	14.5	15.8	16.6	14.9	15.8
23-Sep	11.5	9.8	10.6	11.4	10.4	10.8	17.8	14.5	15.9	16.6	14.9	15.8
24-Sep	12.1	9.2	10.4	11.9	10.2	11.0	18.0	14.8	16.2	16.6	15.2	15.9
25-Sep	12.7	9.6	10.9	12.2	10.5	11.3	17.3	15.1	16.1	16.6	15.3	16.0
26-Sep	13.7	10.4	11.8	12.7	11.0	11.8	17.3	14.8	16.0	16.5	14.9	15.7
27-Sep	14.9	10.9	12.6	13.5	11.4	12.4	17.3	14.7	15.8	16.6	14.9	15.8
28-Sep	15.5	11.5	13.1	14.1	12.1	13.0	16.7	15.0	15.7	16.1	15.2	15.7
29-Sep	16.2	12.3	13.6	14.4	12.8	13.6	17.2	15.1	16	16.5	14.9	15.6
30-Sep	15.7	12.4	13.5	13.8	12.7	13.1	17.3	14.7	15.8	16.5	14.7	15.6
Month				19.5	10.2	15	21.2	13.4	16.5	20.3	14.1	16.5

Table C-4. City of Blackfoot sampling on Snake River at Blackfoot, May 2001 to September 2003 (from Discharge Monitoring Reports).

Date	Flow (cfs)	Total ortho-phosphate as P (mg/L)[1]	Total phosphorus (mg/L)[1]	Ammonia (mg/L)[1]	Nitrate+ nitrite (mg/L)[1]	Total Kjeldahl nitrogen (mg/L)[1]	Turbidity (NTU)[1]	TSS (mg/L)[1]
May-01	1470	<0.05	<0.05	0.06	0.09	0.5	6.78	13
Jun-01								
Jul-01	2910	<0.05	<0.05	<0.04	0.1	0.3	4.77	16
Aug-01								
Sep-01								
Oct-01	2370	<0.05	<0.05	<0.04	<0.04	<0.1	1.4	5
Nov-01								
Dec-01								
Jan-02								
Feb-02								
Mar-02								
Apr-02	1860	<0.05	0.09	<0.04	0.15	0.48	5.3	13
May-02								
Jun-02	2819	0.05	0.05	<0.04	0.02	0.32	6.87	10.5
Jul-02								
Aug-02								
Sep-02								
Oct-02								
Nov-02	2170	<0.05	0.05	<0.04	0.1	0.15	1.12	2
Dec-02								
Jan-03								
Feb-03								
Mar-03	1800	0.05	0.05	0.04	0.18	0.23	4.61	9
Apr-03	1500	0.05	0.05	0.04	0.02	0.21	1.27	2
May-03								
Jun-03								
Jul-03								
Aug-03	4610	<0.05	<0.05	<0.04	<0.02	0.35	4.37	9
Sep-03	2530	<0.05	<0.05	<0.04	<0.02	0.24	1.73	28

[1]TSS=total suspended solids; grab sample